



## Commentary <sup>☆</sup>

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#### Background

Measuring vital signs at home continuously or intermittently using 'telemonitoring' has been widely piloted in people with heart failure, a condition that accounts for much mortality, morbidity and costs to the health service. Yet, despite clinical interest, telemonitoring is not widely integrated into clinical practice. Many promoters of telemedicine, including telemonitoring, have now reinvented themselves as e-Health specialists.<sup>1,2</sup> Some of these specialists advocate that detailed evaluation of the process, especially complex socio technical networks, is equally important as an examination of outcomes.<sup>3</sup> None the less, it is worthwhile to review, from an outcomes perspective, what has been learnt from observational studies and randomised trials.

#### This study's contribution

Louis and colleagues report that it is not possible to go beyond 'may' statements based on studies published to date. Telemonitoring *may* reduce hospitalisation and *may* improve mortality and morbidity. Early studies suggest beneficial trends, but their results are not conclusive.

Other studies are in progress. As Louis and colleagues note, early results from TEN-HMS (Trans-European Network initiative—Homecare Management System)<sup>4</sup> and DIAL (randomised trial of telephonic intervention in chronic heart failure)<sup>5</sup> suggest that telephone support improves mortality and admission rates, respectively. TEN-HMS also found that home telemonitoring had some benefits. These are the first large well designed studies of

telemonitoring and telephone support in heart failure. The results appear consistent with the pilot studies, but have the size and quality to take us beyond 'may' statements. Based on these findings, specialist centres offering chronic heart failure services should consider developing telemonitoring and telephone support services.

#### Integrating e-Health into primary healthcare

The role of e-Health in optimising chronic heart failure management has yet to be established. The majority of these patients, particularly the elderly, are cared for in primary care.<sup>6</sup> When I was involved in early telemonitoring pilot studies<sup>7,8</sup> it was from the perspective of a practising general practitioner and part time academic. I had frequently attempted, and often failed, to optimise therapy for heart failure patients. The principal difficulty was the lack of clinical measurements on which to base therapeutic decisions. This was especially so when the patient felt they were a little worse on either an increased dose of an ACE inhibitor or when starting a beta-blocker. The only clinical measurements on which to base decisions had to be taken in short general practice consultations, where innumerable other factors might be influencing the patient. Telemonitoring could give primary care physicians more information on which to base their decisions.

Louis and colleagues could have included a stronger call for research to assess whether e-Health can address optimisation of primary care (alongside the benefits reported for secondary care). It is also important to explore how e-Health might be integrated into the process of healthcare. In general practice the challenge is to integrate e-Health into short patient centred consultations.<sup>9</sup>

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